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[nslsweb.nsls.bnl.gov](http://nslsweb.nsls.bnl.gov)

## Science Highlight: Osmium is Stiffer than Diamond

Contact: Hyunchoe Cynn ([cynn1@popeye.llnl.gov](mailto:cynn1@popeye.llnl.gov))

Scientists from Lawrence Livermore National Laboratory (LLNL) working at the NSLS and LLNL's Stanford Synchrotron Radiation Laboratory have reported the surprising discovery that metallic osmium is stiffer than covalently bonded diamond. The researchers also found that iridium and ruthenium are as incompressible as rhenium. In addition, they performed first-principles calculations that independently confirm the observed trend in the transition metal bulk moduli. For more on this work, see:

[nslsweb.nsls.bnl.gov/nsls/sci&tech/science/2002/05-Cynn.htm](http://nslsweb.nsls.bnl.gov/nsls/sci&tech/science/2002/05-Cynn.htm)

## Science Highlight: Quasiparticles Refuse to Go Away in High-Temperature Superconductors

Contact: Zikri Yusof ([yusof@bnl.gov](mailto:yusof@bnl.gov))

Scientists working at NSLS beamline U13UB have provided new insight into the properties of overdoped cuprates (bismuth-strontium-copper-oxides). The researchers found that, while underdoped cuprates have exotic properties, overdoped cuprates behave more like regular metals. For more on this work, see:

[nslsweb.nsls.bnl.gov/nsls/sci&tech/science/2002/07-Yusof.htm](http://nslsweb.nsls.bnl.gov/nsls/sci&tech/science/2002/07-Yusof.htm)

## Hands-On Short Course in EXAFS Data Collection and Analysis: September 23-25, 2002

Contact: Bruce Ravel ([ravel@phys.washington.edu](mailto:ravel@phys.washington.edu)) or Simon Bare ([srbare@uop.com](mailto:srbare@uop.com))

A hands-on short course in EXAFS data collection and analysis will be held at the NSLS from September 23-25. This workshop will provide a broad introduction to the collection and analysis of EXAFS data and is aimed at new synchrotron users and young scientists. The three-day course includes classroom lectures given by leading experts, hands-on data collection at NSLS beamlines, and instruction in the use of data analysis software. The lectures will cover topics ranging from the basic physics of x-ray absorption, sample preparation and data collection, and basic principles of data analysis. Participants will collect real data during the beamline practicals and learn to analyze that data during the computer training. For more information, see:

[http://www.x-ll.bnl.gov/exafs\\_workshop.htm](http://www.x-ll.bnl.gov/exafs_workshop.htm)

## High School Student Studies Adult/Child Fingerprint Differences at NSLS

Contact: Lisa Miller ([lmiller@bnl.gov](mailto:lmiller@bnl.gov))

Lara Herscovitch, who will be a senior at Mount Sinai High School on Long Island this September, is using an infrared microscope at the NSLS in an experiment to determine why adults' fingerprints can last longer than children's fingerprints. For more details, see:

<http://www.bnl.gov/bnlweb/pubaf/pr/2002/bnlpr081402.htm>

## BNL Postdoc Wins Award for High-Pressure Research at NSLS

Yongjae Lee, a postdoctoral fellow in the Physics Department at BNL, has won the 2002 Alvin Van Valkenburg Award for his work on a newly discovered class of materials that expand under pressure. This award is given every second year in the name of renowned physicist Alvin Van Valkenburg, co-inventor of the diamond anvil cell, to honor a young scientist who uses this device in his or her scientific research. For more details, see:

<http://www.bnl.gov/bnlweb/pubaf/pr/2002/bnlpr062702.htm>

## Request a 2001 NSLS Activity Report

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[http://nslsweb.nsls.bnl.gov/nsls/pubs/actrpt/2001/title\\_page.pdf](http://nslsweb.nsls.bnl.gov/nsls/pubs/actrpt/2001/title_page.pdf)

If you would like to receive a printed copy, you can request one online at:

<http://nslsweb.nsls.bnl.gov/nsls/pubs/actrpt/default.htm>

## Job Opportunities at the NSLS

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<http://nslsweb.nsls.bnl.gov/nsls/org/Admin/jobs.htm>

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<http://nslsweb.nsls.bnl.gov/nsls/pubs/pubrefs/Default.htm>

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<http://nslsweb.nsls.bnl.gov/nsls/pubs/abstracts/submit.asp>

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<http://nslsweb.nsls.bnl.gov/nsls/dbforms/end-of-run.asp>

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[nslsweb.nsls.bnl.gov/nsls/announcements/nslsonlinenews.htm](http://nslsweb.nsls.bnl.gov/nsls/announcements/nslsonlinenews.htm)

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